SOME SOUTH AMERICAN ROTIFERS

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THE undernoted rotifers were obtained from moss kindly sent to me by Mr. N. D. F. Pearce, of Cambridge, England, in the early summer of 1906. The moss was sent from British Guiana. The locality from which it came was unknown, but it was somewhere in the interior.

A portion of the moss was still moist, but most of it had been dried. The majority of the species were got from the dried moss.

As is usual when dried moss is examined after a lapse of some time, most of the rotifers found belonged to the order Bdelloida. Of this order 13 species were distinguished; 11 of the species were already known, most of them being common and widely distributed species. One, *Callidina perforata*,[1] was only recently discovered in India, and a very distinct variety occurred more abundantly than the type. *C. multispinosa* was represented by a variety, probably of specific value. Two new species are here described.

Four species of the order Ploïma were also found,— one Colurus, two Monostyla,— and one Diglena. I was unable to determine any of these.

ORDER BDELLOIDA

Callidina angusticollis Murray (: 05).— Very abundant. All the examples belonged to the type, or to a small variety. The Indian variety *attenuata* did not occur.

C. perforata Murray.— The most abundant species in the collection. The type (Fig. 1) was fairly plentiful, but a variety, described below, was much more so.

C. p. var. **americana** var. nov. (Figs. 2–3).— Case smaller than in the type, length 106 μ (type about 136 μ). Posterior process

[1]Murray, James, "Some Rotifera of the Sikkim Himalaya." *Journ. Roy. Micr. Soc.*, 1906.

sharply marked off by abrupt constriction, not turned to dorsal side as in the type, but in line with the axis of the case; — perforation towards ventral side (dorsal in type). Dorsal plicæ of the case not distinct, but an obscure tesselation or coarse stippling instead. As in Indian examples, empty cases usually lacked the ventral wall, as though some enemy had found this part vulnerable.

C. constricta Duj. ('41).— Plentiful.

C. aspera Bryce ('92).— A few examples.

C. habita Bryce ('94).— One example, living.

C. quadricornifera Milne ('85–'86).— One small hyaline example.

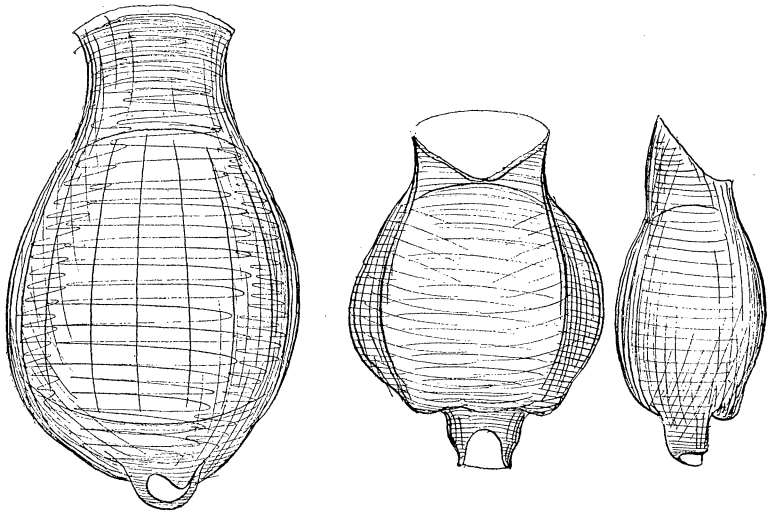


Fig. 1. Fig. 2. Fig. 3.

Callidina perforata Murray.

C. multispinosa Thompson ('92).— In Britain I have found this species variable only within narrow limits. In various warm countries I find many forms related to this species, sufficiently distinct and apparently constant, which are probably distinct species. They are so numerous that I think it would be well to make further comparisons of them before deciding how many of these forms are good species, and I make all provisionally subordinate to *C. multispinosa*. In British Guiana the type was not found, but two varieties were frequent. One variety has all the spines very short. It has a superficial resemblance to *C. papillosa*,

but the arrangement of the spines shows that it belongs to this species. This variety is also found in India and Africa.

C. m. var. **crassispinosa** var. nov. (Fig. 4).—Long anterior spines few, usually 4 on each side, the 2d and 4th of these much thicker than the others. The lateral spine of the anterior row on the central segments of the trunk large and very thick. Skin strongly stippled or papillose.

Other smaller differences from the type will be better understood from the figure. There was no variation from this arrangement of spines in all the examples seen. The variety is much smaller than the type. About 6 examples seen.

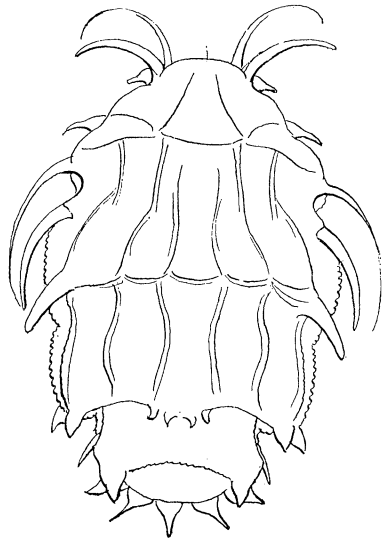


Fig. 4.
Callidina multispinosa, var. *crassispinosa*.

C. ehrenbergi Janson ('93).— One living example.

C. tripus n. sp. (Figs. 5–7)

Specific characters.— Small, 240 μ long, hyaline or whitish, with pale yellow stomach, food not moulded into pellets. Head small, corona 40 μ wide, less than collar and about half diameter of central trunk, discs touching, central process of upper lip single, truncate. Length of antenna $\frac{1}{3}$ diameter of neck. Jaws 18 μ long, teeth 2/2, very thin. Foot 4-jointed, spurs narrow, tapering, divergent; toes large and long, the two ventral put out and drawn in, in the usual manner, when making the step, the dorsal kept always extended and forming with the spurs a tripod. Dorsal skin folds faint, few, lateral deeper. The striking peculiarity is the tripod, which is unique in the order. Otherwise the animal comes nearest *C. ehrenbergi* Janson, from which it is distinguished by the smaller head, closer discs, and truncate upper lip. Abundant.

C. speciosa n. sp. (Figs. 8–10)

Specific characters.— Very small, 163 μ feeding to 238 μ creeping. Head very small, diameter of corona 26 μ, of prominent collar 38 μ. Food not moulded into pellets. Teeth 2/2. Anal segment with lateral prominences. Foot 3-jointed, first joint with lateral processes, spurs small, tapering, divergent. Toes three. Dorsal longitudinal and ventral transverse skinfolds forming symmetrical pattern, which is constant. Length of antenna half diameter of neck.

The most distinctive character is the pattern formed by the

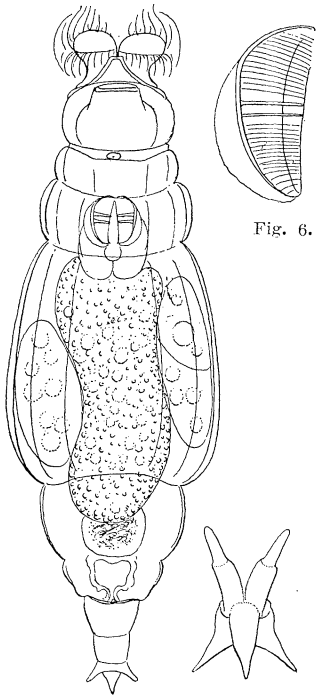
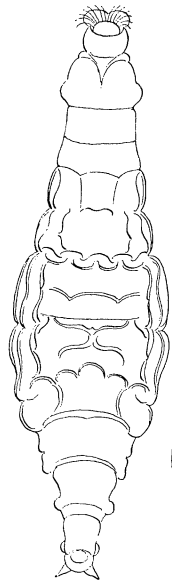


Fig. 5. Fig. 7.
Callidina tripus n. sp.

Fig. 6.



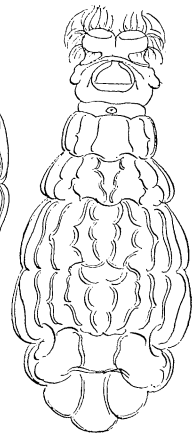


Fig. 8. Fig. 9.
Callidina speciosa n. sp.

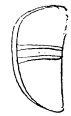


Fig. 10

skinfolds. Many species have a similar pattern formed by the dorsal wrinkles, but no other species has the ventral surface so ornate. Apart from this character it has no close resemblance

to any other species. Those which approach it in general form and dorsal wrinkling have larger heads with separated discs.

Not abundant, about a dozen examples seen.

Rotifer longirostris (Janson) ('93).—Several examples of the type were found, but none of the Indian varieties occurred.

Adineta gracilis Janson ('93).— Not plentiful.

A. vaga Davis ('73).— Rare.

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